

CLAIMS

1. (Presently Presented) A multi-grip blind rivet comprising
 - a. a tubular shell;
 - b. a mandrel extending through the shell;
 - c. the shell has an outwardly extending flange at one end forming a rivet head, and having a first set of non-annular, non-secant shaped radial indentations arranged around the periphery of the shell at a first distance from the rivet head, and a second set of non-annular, non-secant shaped radial indentations being arranged around the periphery of the shell at a second distance from the rivet head, the radial indentations crimped into the rivet shell; the end of the shell that is remote from the rivet head being the blind end of the rivet shell; and
 - d. the mandrel having a head at one end which abuts against the blind end of the shell, and a stem extending from the head, the stem having a point of weakness part way along its length, and disposed within the shell.

2. (Presently Presented) The multi-grip rivet claimed in Claim 1 wherein:

- a. a third set of indentations arranged around the periphery of the shell at a third distance from the rivet head.

3. (Presently Presented) The multi-grip rivet claimed in Claim 2 wherein:

the hardness of the rivet shell in the region of each of the indentations is between 20% to 30% higher than the hardness of the rivet shell at a point midway between adjacent longitudinally spaced indentations.

4. (Presently Presented) The multi-grip rivet claimed in Claim 1 wherein:

a. the depth of at least one of the sets of the indentations, prior to a rivet setting process, is at least 0.20mm.

5. (Presently Presented) The multi-grip blind rivet claimed in Claim 4 wherein:

a. the depth of at least one of the sets of the indentations, prior to the rivet setting process, is at least 20 to 25% of the thickness of the shell.

6. (Presently Presented) The multi-grip blind rivet claimed in Claim 5 wherein:

a. each set of radial indentations having between two to eight indentations.

7. (Presently Presented) The multi-grip blind rivet claimed in Claim 6 wherein:

a. the longitudinal spacing between adjacent sets of indentations is at least 2mm.

8. (Presently Presented) The multi-grip blind rivet claimed in Claim 7 wherein:

a. the radial indentations are circular with outwardly sloping edges.

9. (Presently Presented) The multi-grip blind rivet claimed in Claim 8 wherein:

a. the first and second set of indentations in the shell are respectively nearer to, and further from, the shell flange, than the point of weakness of the mandrel is to the shell flange.

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (Presently Presented) The multi-grip blind rivet claimed in Claim 9 wherein:

a. an aperture formed in each of the workpiece components; and
b. the apertures aligned with each other.

14. (Presently Presented) The multi-grip blind rivet claimed in Claim 13 wherein:

a. one of the workpiece components is formed of a soft material of predetermined density.

15. (Presently Presented) The multi-grip blind rivet claimed in Claim 13 wherein:

a. at least one of the workpiece components is formed of a friable material of predetermined density.